

AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below. The language being added is underlined ("___") and the language being deleted contains either a strikethrough ("—") or is enclosed by double brackets ("[[]]").

LISTING OF CLAIMS

1. (Currently Amended) An ~~semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:

a central office (CO) operator configured to perform spectrum management, wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[[]])~~ overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 10\%$ kilohertz (kHz); $-97.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-92.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-36.5 \pm 10\%$ dBm/Hz at $25 \pm 10\%$ kHz; $-36.5 \pm 10\%$ dBm/Hz at $1104 \pm 10\%$ kHz; $-46.5 \pm 10\%$ dBm/Hz at $2208 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $3925 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; $-103.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; and $-103.5 \pm 10\%$ dBm/Hz at $11040 \pm 10\%$ kHz.

2. (Currently Amended) An ~~semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:
a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[()])~~ overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 10\%$ kilohertz (kHz); $-97.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-72.5 \pm 10\%$ dBm/Hz at $80 \pm 10\%$ kHz; $-36.5 \pm 10\%$ dBm/Hz at $138 \pm 10\%$ kHz; $-36.5 \pm 10\%$ dBm/Hz at $1104 \pm 10\%$ kHz; $-46.5 \pm 10\%$ dBm/Hz at $2208 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $3925 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; $-103.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; and $-103.5 \pm 10\%$ dBm/Hz at $11040 \pm 10\%$ kHz.

3. (Currently Amended) An ~~semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:
a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[()])~~ overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 10\%$ kilohertz (kHz); $-97.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-92.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-56.5 \pm 10\%$

dBm/Hz at $25 \pm 10\%$ kHz; $-56.5 \pm 10\%$ dBm/Hz at $1104 \pm 10\%$ kHz; $-46.5 \pm 10\%$ dBm/Hz at $2208 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $3925 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; $-103.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; and $-103.5 \pm 10\%$ dBm/Hz at $11040 \pm 10\%$ kHz.

4. (Currently Amended) ~~An semiconductor and logic asynchronous digital~~
subscriber line (ADSL) system comprising:
a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD)
mask for spectral shaping of an asynchronous digital subscriber line (ADSL[[]]) overlap
spectrum transmission over a plain old telephone system (POTS), the PSD mask
represented at least in part by a plurality of break points, the plurality of break points
including: $-97.5 \pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 10\%$ kilohertz (kHz); $-$
 $97.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-92.5 \pm 10\%$ dBm/Hz at 80 kHz; $-56.5 \pm 10\%$ dBm/Hz
at $138 \pm 10\%$ kHz; $-56.5 \pm 10\%$ dBm/Hz at $1104 \pm 10\%$ kHz; $-46.5 \pm 10\%$ dBm/Hz at 2208
 $\pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $3925 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at 8500
 $\pm 10\%$ kHz; $-103.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; and $-103.5 \pm 10\%$ dBm/Hz at
 $11040 \pm 10\%$ kHz.

5. (Currently Amended) ~~An semiconductor and logic asynchronous digital~~
subscriber line (ADSL) system comprising:
a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD)

mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[[]])~~ overlap spectrum over an integrated digital services network (ISDN), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: -90 $\pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at 0 $\pm 10\%$ kilohertz (kHz); -90 $\pm 10\%$ dBm/Hz at 93.1 $\pm 10\%$ kHz; -62 $\pm 10\%$ dBm/Hz at 209 $\pm 10\%$ kHz; -36.5 $\pm 10\%$ dBm/Hz at 255 $\pm 10\%$ kHz; -36.5 $\pm 10\%$ dBm/Hz at 1104 $\pm 10\%$ kHz; -46.5 $\pm 10\%$ dBm/Hz at 2208 $\pm 10\%$ kHz; -101.5 $\pm 10\%$ dBm/Hz at 3925 $\pm 10\%$ kHz; -101.5 $\pm 10\%$ dBm/Hz at 8500 $\pm 10\%$ kHz; -103.5 $\pm 10\%$ dBm/Hz at 8500 $\pm 10\%$ kHz; and -103.5 $\pm 10\%$ dBm/Hz at 11040 $\pm 10\%$ kHz.

6. (Currently Amended) ~~An semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:

a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[[]])~~ overlap spectrum over an integrated digital services network (ISDN), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: -90 $\pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at 0 $\pm 10\%$ kilohertz (kHz); -90 $\pm 10\%$ dBm/Hz at 93.1 $\pm 10\%$ kHz; -62 $\pm 10\%$ dBm/Hz at 209 $\pm 10\%$ kHz; -56.5 $\pm 10\%$ dBm/Hz at 255 $\pm 10\%$ kHz; -56.5 $\pm 10\%$ dBm/Hz at 1104 $\pm 10\%$ kHz; -46.5 $\pm 10\%$ dBm/Hz at 2208 $\pm 10\%$ kHz; -101.5 $\pm 10\%$ dBm/Hz at 3925 $\pm 10\%$ kHz; -101.5 $\pm 10\%$ dBm/Hz at 8500 $\pm 10\%$ kHz; -103.5 $\pm 10\%$ dBm/Hz at 8500 $\pm 10\%$ kHz; and -103.5 $\pm 10\%$ dBm/Hz at 11040 $\pm 10\%$ kHz.

7. (Currently Amended) An ~~semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:
a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[()])~~ overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-97.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; $-92.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; $-36.5 \pm 5\%$ dBm/Hz at $25 \pm 5\%$ kHz; $-36.5 \pm 5\%$ dBm/Hz at $1104 \pm 5\%$ kHz; $-46.5 \pm 5\%$ dBm/Hz at $2208 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $3925 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; $-103.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; and $-103.5 \pm 5\%$ dBm/Hz at $11040 \pm 5\%$ kHz.

8. (Currently Amended) An ~~semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:
a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[()])~~ non-overlap spectrum over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-97.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; $-72.5 \pm 5\%$ dBm/Hz at $80 \pm 5\%$ kHz; $-36.5 \pm 5\%$

dBm/Hz at $138 \pm 5\%$ kHz; $-36.5 \pm 5\%$ dBm/Hz at $1104 \pm 5\%$ kHz; $-46.5 \pm 5\%$ dBm/Hz at $2208 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $3925 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; $-103.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; and $-103.5 \pm 5\%$ dBm/Hz at $11040 \pm 5\%$ kHz.

9. (Currently Amended) An ~~semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:

a central office (CO) operator configured to perform spectrum management, wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL)~~ overlap spectrum over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-97.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; $-92.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; $-56.5 \pm 5\%$ dBm/Hz at $25 \pm 5\%$ kHz; $-56.5 \pm 5\%$ dBm/Hz at $1104 \pm 5\%$ kHz; $-46.5 \pm 5\%$ dBm/Hz at $2208 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $3925 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; $-103.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; and $-103.5 \pm 5\%$ dBm/Hz at $11040 \pm 5\%$ kHz.

10. (Currently Amended) An ~~semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:

a central office (CO) operator configured to perform spectrum management, wherein the CO operator is further configured to provide a power spectral density

(PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL)~~ non-overlap spectrum over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-97.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; $-92.5 \pm 5\%$ dBm/Hz at $80 \pm 5\%$ kHz; $-56.5 \pm 5\%$ dBm/Hz at $138 \pm 5\%$ kHz; $-56.5 \pm 5\%$ dBm/Hz at $1104 \pm 5\%$ kHz; $-46.5 \pm 5\%$ dBm/Hz at $2208 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $3925 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; $-103.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; and $-103.5 \pm 5\%$ dBm/Hz at $11040 \pm 5\%$ kHz.

11. (Currently Amended) ~~An semiconductor and logic asynchronous digital subscriber line (ADSL) system~~ comprising:
a central office (CO) operator configured to perform spectrum management, wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL)~~ overlap spectrum over an integrated digital services network (ISDN), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-90 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-90 \pm 5\%$ dBm/Hz at $93.1 \pm 5\%$, kHz; $-62 \pm 5\%$ dBm/Hz at $209 \pm 5\%$ kHz; $-36.5 \pm 5\%$ dBm/Hz at $255 \pm 5\%$ kHz; $-36.5 \pm 5\%$ dBm/Hz at $1104 \pm 5\%$ kHz; $-46.5 \pm 5\%$ dBm/Hz at $2208 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $3925 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; $-103.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; and $-103.5 \pm 5\%$ dBm/Hz at $11040 \pm 5\%$ kHz.

12. (Currently Amended) ~~An semiconductor and logic~~ asynchronous digital subscriber line (ADSL) system comprising:
a central office (CO) operator configured to perform spectrum management,
wherein the CO operator is further configured to provide a power spectral density (PSD) mask for spectral shaping of an ~~asynchronous digital subscriber line (ADSL[[]])~~ overlap spectrum over an integrated digital services network (ISDN), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-90 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-90 \pm 5\%$ dBm/Hz at $93.1 \pm 5\%$ kHz; $-62 \pm 5\%$ dBm/Hz at $209 \pm 5\%$ kHz; $-56.5 \pm 5\%$ dBm/Hz at $255 \pm 5\%$ kHz; $-56.5 \pm 5\%$ dBm/Hz at $1104 \pm 5\%$ kHz; $-46.5 \pm 5\%$ dBm/Hz at $2208 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $3925 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; $-103.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; and $-103.5 \pm 5\%$ dBm/Hz at $11040 \pm 5\%$ kHz.